

Listing of the Claims:

This listing of claims contains no amendments and is being provided for the convenience of the Examiner:

Listing of Claims:

Claims 1-28 (Cancelled)

29. (Previously Presented) A network structure controlling device comprising:
a memory; and
a processor in communication with the memory, the memory comprising computer executable instructions, the computer executable instructions executable with the processor and comprising:

a function relocation unit configured to analyze, in response to an instruction of relocation, a plurality of node resources in a network based on statuses of the node resources, to determine new node locations of at least one node function, and to relocate the at least one node function to the new node locations in accordance with a relocation plan;

the function relocation unit being further configured to transmit a transfer instruction to a first device for relocation of the at least one node function from the first device to a second device, the first device being configured to transmit node function definition data to the second device in response to receipt of the transfer instruction, the node function definition data comprising executable code that implements the at least one node function, the node resources comprising resources of the first and second devices;

a path restructure unit configured to restructure a structure of paths in the network into an optimum condition in accordance with statuses of link resources in the network and in response to an instruction of restructuring, wherein the path restructure unit is configured to determine a restructuring plan for the structure of the paths based on an exchange of data on a draft relocation plan of the at least one node function and

data on a draft restructuring plan of the structure of the paths, the exchange of data being between the function relocation unit and the path restructure unit; and

a control unit configured to determine whether transmission of the instruction of relocation to the function relocation unit is necessary and whether transmission of the instruction of restructuring to the path restructure unit is necessary based on the statuses of the node resources and the statuses of link resources, wherein the control unit is further configured to selectively transmit the instruction of relocation and the instruction of restructuring.

30. (Previously Presented) The network structure controlling device of claim 29, wherein the function relocation unit is configured to determine the first device and the second device.

31. (Previously Presented) The network structure controlling device of claim 30, wherein the control unit is configured to:

transmit the instruction of relocation in response to a determination that relocation of the at least one node function from the first device to the second device is necessary; and

transmit the instruction of restructuring in response to a determination that reconfiguration of a communication path formed in the network is necessary.

32. (Previously Presented) The network structure controlling device of claim 30, wherein

the function relocation unit is configured to generate a provisional determination of the first device and the second device, the draft relocation plan of the at least one node function comprising the provisional determination of the first device and the second device; and

the path restructure unit is configured to generate a final determination of a new communication path based on the provisional determination of the first device and the

second device, the restructuring plan of the structure of the paths comprising the final determination of the new communication path.

33. (Previously Presented) The network structure controlling device of claim 30 further comprising an exclusive control unit configured to prevent a node resource and a link resource of the first device and the second device from being controlled by another network structure controlling device in the network in response to a determination by the control unit that relocation of the at least one node function of the first device in the network is necessary.

34. (Previously Presented) The network structure controlling device of claim 30, wherein the at least one node function comprises at least one of a firewall function, a mobility control function, a call control function, a data copy function, a multicast function, a mobile anchor function, or a mobile buffering function.

35. (Previously Presented) The network structure controlling device of claim 29, wherein the first device is further configured to transmit both user data and the node function definition data directly from the first device to the second device, the user data being data processed in response to execution of the executable code that implements the at least one node function.

36. (Previously Presented) The network structure controlling device of claim 35, wherein the control unit is further configured to selectively transmit the instruction of relocation in response to receipt of an adaptive control request indicative of detection of movement of a user terminal from a first coverage area to a second coverage area, wherein relocation of the at least one node function comprises relocation of user data from a first service node that serves the first coverage area to a second service node that serves the second coverage area, the node resources include node resources of the first service node and the second service node, and the user data is associated with the user terminal.

37. (Previously Presented) The network structure controlling device of claim 29, wherein the control unit is further configured to determine whether transmission of the instruction of relocation to the function relocation unit is necessary in response to detection of movement of a user terminal from a first coverage area to a second coverage area.

38. (Previously Presented) The network structure controlling device of claim 29, wherein the at least one node function is at least one network service unavailable at the second device prior to both receipt of the executable code from the first device and addition of the executable code to the second device.